

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for making a shelf-stable product comprising a comminuted vegetable, said method comprising the steps of:

- (a) at least partially cooking a vegetable having a pH of at least 4.5;
- (b) comminuting the vegetable of step (a);
- (c) packaging the comminuted vegetable of step (b) in a sealed container;
- (d) optionally mixing flavoring ingredients with the comminuted vegetable prior to step (c);
- (e) sterilizing said packaged vegetable by pressurizing comprising subjecting said packaged comminuted vegetable in at least one stage to a first pressure of at least about 50,000 psi at a first temperature above ambient temperature to heat the comminuted vegetable to a temperature in excess of about 90°C to render it shelf-stable, wherein said vegetable is not subjected to an elevated temperature for a time greater than about 120 minutes after comminuting in step (b) and prior to sterilization in step (e); and
- (f) releasing said pressure.

2. The method of Claim 1 in which said sterilized vegetable of step (f) when reheated and served has a flavor substantially the same as said comminuted vegetable in step (b).

3. The method of Claim 1 in which said comminuted vegetable is not subjected to said elevated temperature for a time greater than about 25 minutes.

4. The method of Claim 1 in which said vegetable is not subjected to said elevated temperature for a time greater than about 15 minutes.

5. The method of Claim 1 in which said elevated temperature is at least about 75°C.

6. The method of Claim 1 in which prior to said cooking in step (a), said vegetable is precooked and cooled.

7. The method of Claim 1 in which said vegetable is not cooled more than about 30°C between mashing in step (b) and sterilizing in step (e).

8. The method of Claim 1 in which said first temperature is greater than about 60°C.

9. The method of Claim 1 in which said vegetable is selected from the group consisting of: potatoes, bean, avocados, broccoli, squash, peas, carrots, radishes, rutabaga, asparagus, beets, string beans, other legumes, grains, such as corn, wheat and rice, sweet potatoes, yams, cauliflower, cabbage, kohlrabi, okra, spinach, garlic, onions, peppers, tomatoes, parsley, parsnips, turnips, cucumbers, plant sprouts, celery, bok choy, collards, Brussels sprouts, egg plants, squash, pumpkins, fennel, kale, pomegranate, leeks, lettuce, mushrooms, olives, rhubarb, chives, and coconut.

10. The method of Claim 1 in which said vegetable is potatoes or beans.

11. The method of Claim 1 in which said vegetable is potatoes.

12. The method of Claim 1 in which said pressurizing further comprises the steps of releasing said first pressure and subjecting said packaged vegetable in a second stage to a second pressure in excess of 30,000 psi at a second temperature above ambient temperature, said second stage occurring either before or after said first stage, and wherein pressure is released between said first and second stages.

13. The method of Claim 1 further comprising the steps of:

(g) after step (b) and prior to step (e), cooling said mashed vegetable;
and

(h) after step (g), heating said cooled mashed vegetable to said initial pressurizing temperature in a time less than about 40 minutes.

14. The method of Claim 13 in which said heating in step (h) is for less than about 15 minutes.

15. A method for making a shelf-stable product comprising a partially cooked uncommunited vegetable, said method comprising the steps of:

(a) packaging an uncomminuted partially cooked vegetable at a temperature in excess of about 60°C in a sealed container;

(b) sterilizing said packaged partially cooked uncomminuted vegetable by pressurizing comprising subjecting said packaged uncomminuted vegetable in at least one stage to a first pressure of at least 50,000 psi at a first temperature above ambient temperature to heat the uncomminuted vegetable to a temperature in excess of about 90°C to render it shelf-stable; and

(c) releasing said pressure.

16. The method of Claim 15 in which said sterilized uncomminuted vegetable after step (c) when reheated and served has a flavor substantially the same as said partially cooked vegetable of step (a).

17. The method of Claim 15 in which said vegetable is pressurized within about 15 minutes of packaging.

18. The method of Claim 15 in which said uncomminuted vegetable is heated to said packaging temperature in less than about 65 minutes.

19. The method of Claim 15 in which said packaged uncomminuted vegetable at a temperature in excess of 60°C is placed in a chamber for pressurizing in step (b).

20. The method of Claim 15 wherein said packaged vegetable is pressurized within about 120 minutes of packaging.

21. The method of Claim 15 in which said uncomminuted packaged vegetable is not cooled more than about 30°C between packaging in step (a) and sterilizing in step (b).

22. The method of Claim 15 in which said first temperature is greater than about 70°C.

23. The method of Claim 15 in which said vegetable is selected from the group consisting of : potatoes, beans, avocados, broccoli, squash, peas, carrots, radishes, rutabaga, asparagus, beets, string beans, other legumes, grains such as corn, wheat and

rice, sweet potatoes, yams, cauliflower, cabbage, kohlrabi, okra, spinach, garlic, onions, peppers, tomatoes, parsley, parsnips, turnips, cucumbers, plant sprouts, celery, bok choy, collards, Brussels sprouts, egg plants, squash, pumpkins, fennel, kale, pomegranate, leeks, lettuce, mushrooms, olives, rhubarb, chives, and coconuts.

24. The method of Claim 15 in which said vegetable is potatoes or beans.

25. The method of Claim 15 in which said vegetable is potatoes.

26. The method of Claim 15 in which said pressurizing further comprises the steps of releasing said first pressure and subjecting said packaged vegetable in a second stage to a second pressure in excess of 30,000 psi at a second temperature above ambient temperature, said second stage occurring either before or after said first stage, and wherein pressure is released between said first and second stages.

27. The method of Claim 25 in which said potato is at least partially peeled prior to packaging.

28. The method of Claim 15 in which said vegetable is subject to a temperature in excess of 70°C for less than about 60 minutes prior to pressurizing.

29. The method of Claim 25 in which, after releasing said pressure, said potato is cut into pieces and fried.

30. The method of Claim 25 in which, after releasing said pressure, said potato is grilled or baked.

31. The method of Claim 25 in which, after pressurizing, said potato is cooked.

32. The method of Claim 25 in which said partially cooked potato is whole or in pieces.

33. The method of Claim 32 or 15 in which said partially cooked potato is characterized by having less than 80% of the starch gelatinized.

34. A shelf-stable potato which, when precut or cut into a size suitable for making French fries, is friable to French fries in less than about 40% of the frying time, under the same frying conditions, of frozen potatoes of the same size.

35. A shelf-stable potato which, when precut or cut into a size suitable for making French fries, is friable to a French fry having an oil content less than about 50% of the oil content of fries produced at the same frying temperature from frozen potatoes of the same size.

36. The method of Claim 33 wherein the partially cooked potato is characterized by a degree of gelatinization less than 70%.

37. The method of Claim 33 wherein the partially cooked potato is characterized by a degree of gelatinization less than 60%.

38. The method of Claim 33 wherein the partially cooked potato is characterized by a degree of gelatinization less than 50%.

39. A method for making a shelf-stable potato product comprising a partially cooked whole or potato piece, the method comprising the steps of:

(a) packaging a partially cooked whole potato or potato piece, said whole or potato piece having been cooked but the degree of gelatinization being less than 80%;

(b) sterilizing said packaged potato by pressurizing comprising subjecting said packaged potato in at least one stage to a first pressure of less than 50,000 psi at a first temperature above ambient temperature to heat the potato to a temperature in excess of about 90°C to render it shelf stable; and

(c) releasing said pressure.

40. The method of Claim 39 wherein the partially cooked potato is characterized by a degree of gelatinization less than 70%.

41. The method of Claim 39 wherein the partially cooked potato is characterized by a degree of gelatinization less than 60%.

42. The method of Claim 39 wherein the partially cooked potato is characterized by a degree of gelatinization less than 50%.